

CLAIMS

1. High purity zinc oxide powder, high purity zinc oxide sputtering target and high purity zinc oxide thin film wherein the impurity content excluding gas components of N, C, Cl, S and P is less than 100wtppm.
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2. High purity zinc oxide powder, high purity zinc oxide sputtering target and high purity zinc oxide thin film wherein the impurity content excluding gas components of N, C, Cl, S and P is less than 10wtppm.
3. High purity zinc oxide powder, high purity zinc oxide sputtering target and high purity zinc oxide thin film according to claim 1 or claim 2, wherein the total content of gas components of C, Cl and S is less than 100wtppm.
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4. High purity zinc oxide powder, high purity zinc oxide sputtering target and high purity zinc oxide thin film according to any one claims 1 to 3, wherein the Pb content as impurities is less than 5wtppm.
5. High purity zinc oxide powder, high purity zinc oxide sputtering target and high purity zinc oxide thin film according to any one claims 1 to 4, wherein Mg and Al are respectively less than 1wtppm.
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6. High purity zinc oxide sputtering target and high purity zinc oxide thin film according to any one claims 1 to 5, wherein the crystal grain size of zinc oxide is 100 μ m or less.
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7. A manufacturing method of high purity zinc oxide powder including the steps of subjecting a raw material such as Zn-containing scrap to acid leaching or electrolytic extraction, thereafter performing solvent extraction and activated carbon treatment thereto in order to remove impurities, neutralizing the resultant solution freed of impurities with an alkaline solution to obtain zinc hydroxide, and firing the zinc hydroxide to obtain zinc oxide.
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8. The manufacturing method of high purity zinc oxide powder according to any one of claims 1 to 5, including the steps of subjecting a raw material

such as Zn-containing scrap to acid leaching or electrolytic extraction, thereafter performing solvent extraction and activated carbon treatment thereto in order to remove impurities, neutralizing the resultant solution freed of impurities with an alkaline solution to obtain zinc hydroxide, and firing the
5 zinc hydroxide to obtain zinc oxide.

9. The manufacturing method of high purity zinc oxide powder according to claim 7 or claim 8, wherein the grain size of zinc oxide powder is 0.1 to 100 μ m.